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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:                    :  Group Art Unit: 2641
                                         :  Examiner: A. Armstrong
Scott A. Morgan et al.                   :  Intellectual Property
Serial No: 09/213,858                    :  Law Department - 4054
Filed: 12/16/98                          :  International Business
Title:  SPEECH COMMAND INPUT            :  Machines Corporation
RECOGNITION SYSTEM FOR                   :  11400 Burnet Road
INTERACTIVE COMPUTER DISPLAY            :  Austin, Texas  78758
WITH MEANS FOR CONCURRENT AND           :
MODELESS DISTINGUISHING                  :
BETWEEN SPEECH COMMANDS AND              :
SPEECH QUERIES FOR LOCATING             :
COMMANDS                                 :
Date: _January 22, 2002_                 :
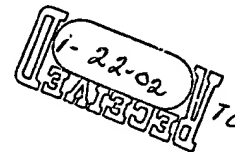
BRIEF ON APPEAL

Assistant Commissioner of Patents
Washington, D.C. 20231
Sir:

     This is an Appeal from the Final Rejection of Claims 1-
15 of this Application.  An Appendix containing a copy of
each of the Claims is attached.


I.   Real Party in Interest

     The real party in interest is International Business
Machines Corporation, the assignee of the present
Application.


II.   Related Appeals and Interferences

     U.S. Application SN. 09/213,656, Scott A. Morgan et
al., filing date: 12/17/98.



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## III. Status of Claims

**A. TOTAL NUMBER OF CLAIMS IN APPLICATION**

There are 15 claims in this Application.

**B. STATUS OF ALL THE CLAIMS**

1. Claims cancelled:  None.
2. Claims withdrawn from consideration but not cancelled:  None.
3. Claims pending:  None.
4. Claims allowed:  None.
5. Claims rejected: Claims 1-15.

**C. CLAIMS ON APPEAL**

Claims on appeal: Claims 1-15.

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## IV.  Status of Amendment

Claims 1-15 were in the filed Application.

Claims 1 through 15 in this Application were first rejected under 35 U.S.C. 102(b) in an Office Action mailed October 3, 2000.

Applicants filed an Amendment on January 9, 2001 which amended the claims to correct informalities, and traversed the rejection under 35 U.S.C. 102(b).

In a Office Action mailed March 28, 2001, Claims 1-15 were rejected in a new rejection under sections 35 U.S.C. 103(a).

Applicants filed an Amendment on June 25, 2001 which amended the claims to their present form, and traversed the rejection.

The claims were finally rejected in a Final Rejection mailed September 13, 2001.

Applicants submitted an Response after Final Rejection filed October 12, 2001.

An Advisory Office Action mailed October 24, 2001 maintained the Final Rejection of Claims 1-15.

Claims 1-15 are now on Appeal.

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## V.   Summary of Invention

The present invention is directed to command control technology, wherein, for example, a user may navigate through a computer system's graphical user interface (GUI) by the user speaking the commands which are customarily found in the systems' menu text, icons, labels, buttons, etc..  The key to the invention is that in addition to means responsive to a detected speech command for carrying out the system action corresponding to the command, there are further means responsive to a detected speech query which is not a command for attempting to locate commands applicable to said query.

## VI.   Issues

Whether Claims 1-15 are unpatentable under 35 U.S.C. 103(a) over Gould et al. (US Patent No. 6,088,671) in view of Morin et al. (US Patent No. 5,748,841).

## VII.   Grouping of Claims

All of the claims stand or fall together.

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## VIII.  Argument

Claims 1-15 are unobvious under 35 U.S.C. 103(a) over Gould et al. (US Patent No. 6,088,671) in view of Morin et al. (US Patent No. 5,748,841).

Gould et al. does not disclose or suggest means which are responsive to speech queries which are not predetermined speech commands to then attempt to locate predetermined speech commands which are applicable to the speech queries. Gould et al. only teaches distinguishing spoken text from predetermined speech commands. This is taught in Col. 4, lines 26-67 and Col. 5, lines 1-2 cited by the Examiner. The recognized predetermined commands are sent to be executed while the text is sent to be typed.

Gould et al. does even consider the processing of speech queries which are not predetermined commands. In fact, the process of Gould et al. would in all likelihood treat such non-predetermined speech queries as ordinary text, and send the query language to be typed. It should be noted that the description in Gould Col. 4, line 59 - Col. 5, line 2, sets forth the CPU compares the incoming speech to predetermined commands. Then, if there is a match to one of the predetermined commands, the predetermined command is executed. Otherwise the speech is considered text to be typed. Thus, in Gould et al., a speech query which is not recoginzed as a predetermined command would be considered as text to be typed.

**Examiner's Argument**

The Examiner relies on the next section in Gould et al., (Col. 5, lines 3-16) as a teaching of means responsive to a speech query for locating applicable commands. Here Gould et al. disclose that if the user wishes to have the computer display an extensive listing of possible predetermined commands, he may speak the predetermined

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command, "What Can I Say ?" to trigger the display of an
extensive list of predetermined commands.

It is submitted that one skilled in the art would not
find the term "What Can I Say?" to be anything other than a
predetermined command used to trigger a list of commands.
It certainly would not be suggestive of a random non-
predetermined speech query.  There is nothing in Gould et
al. suggestive of how any non-predetermined speech query
could be interpreted and processed.  It would be understood
that if even a single word were left out of "What Can I
Say?", so that it were spoken: "What Can Say?" or "What I
Say?", it would no longer be recognized as a command, and
would thus be sent to be typed as part of text.  <u>Gould et
al. does not suggest means which are responsive to speech
queries that are not predetermined speech commands for then
attempting to locate commends applicable to the speech
query.</u>

In attempting to cure this basic deficiency of the
Gould et al. reference, the Examiner has picked and chosen a
portion of the Morin et al. disclosure, and given it an
interpretation and then combined it with the disclosure of
Gould et al. in a manner which is in no way suggested by
either of the combined references.

Morin et al. relates to a complex process for
heuristically teaching a user the command languages of
computer operating systems as well as programming
applications for such systems through spoken user input and
feedback from the system.  There is no suggestion from the
basic Gould et al. reference as to why and how one skilled
in the art could modify it with elements of the heuristic
i.e. self-learning system for developing command terms of
Morin et al..

Even if it is conceded that somewhere in the complex
system of Morin et al., there is a suggestion of using a
speech query to locate a specific command, why would a user

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of the basic Gould et al. system consider modifying it to
include such querying for commands?   To modify Gould et al.
with the teaching Morin et al., a user skilled in the art
would have to determine first how to perform the basic Gould
function of distinguishing their predetermined commands from
spoken text to be typed but then somehow further distinguish
within the same spoken text between text to be typed and
speech queries which are to be used to locate commands?

**The suggestion for combining these Gould et al. with Morin
et al. could only come from Applicants' own teaching, and,
thus, cannot form any basis for a combination of
references.**

        Is the Examiner suggesting we should leave out the text
to be typed function of the Gould reference but then include
the alleged Morin function of using spoken text as a query
to locate commands?   If she is, then Applicants submit that
such a proposed combination of references is being made not
with the requisite foresight of one skilled in the art, but
rather with the hindsight obtained solely by the teaching of
the present invention.   This approach cannot be used to
render Applicants' invention unpatentable.

            "To imbue one of ordinary skill in the art
        with knowledge of the invention in suit, when no
        prior art references of record convey nor suggest
        that knowledge, is to fall victim to the insidious
        effect of a hindsight syndrome wherein that which
        only the inventor taught is used against its
        teacher." W. L. Gore, 721 F 2d at 1553, 220 USPQ,
        pp. 312-313.


            "One cannot use hindsight reconstruction to
        pick and choose among isolated disclosures in the
        prior art to deprecate the claimed invention." In
        re Fine, 5 USPQ 2d 1596 (C.A.F.C.) 1988.


        It is submitted that the suggestion for combining Gould
et al. and Morin et al. in the manner proposed by the
Examiner could only come from Applicants' own teaching, and,

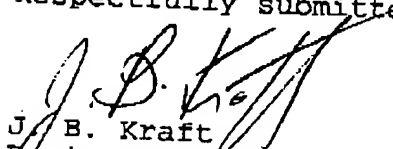AT9-98-344                         7

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thus, cannot form any basis for a combination of references.


## IX. Conclusion

Accordingly, Claims 1-15 are submitted to be patentable under 35 U.S.C. 103(a) over Gould et al. (US Patent No.6,088,671) in view of Morin et al. (US Patent No. 5,748,841). It is respectfully requested that the Final Rejection be reversed, and that Claims 1-15, all of the remaining claims in the present patent application be found to be in condition for allowance.


Respectfully submitted,

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## APPENDIX

### Claims on Appeal

1.  An interactive computer controlled display system with speech command input recognition comprising:

    means for predetermining a plurality of speech commands each associated with a corresponding plurality of system actions,

    means for concurrently detecting said predetermined speech commands and non-predetermined speech queries for locating commands,

    means responsive to a predetermined detected speech command for carrying out the system action corresponding to the command, and

    means responsive to a detected non-predetermined speech query for attempting to locate predetermined commands applicable to said query.

2.  The system of claim 1 further including means for displaying said detected speech query.

3.  The system of claim 2 further including means for displaying located commands applicable to said query.

4.  The system of claim 3 further including means responsive to a detected speech query for modifying a displayed prior speech query whereby a user may speak a displayed located command to activate said means for carrying out a system action or speak a query to modify said prior query to locate commands other than said displayed commands without switching between command and query modes of speech detection.

5.  The system of claim 4 wherein said means for modifying

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said prior speech query replaces said prior query with a new speech query.

6.   A method for providing speech command input to an interactive computer controlled display system with speech command input recognition comprising:

predetermining a plurality of speech commands each associated with a corresponding plurality of system actions,

concurrently detecting said predetermined speech commands and non-predetermined speech queries for locating commands,

responsive to a detected predetermined speech command, carrying out the system action corresponding to the command, and

responsive to a detected non-predetermined speech query, attempting to locate predetermined commands applicable to said query.

7.   The method of claim 6 further including the step of displaying said detected speech query.

8.   The method of claim 7 further including the step of displaying located commands applicable to said query.

9.   The method of claim 8 further including the step responsive to a detected speech query of modifying a displayed prior speech query whereby a user may speak a displayed located command to activate said carrying out of a system action or speak a query to modify said prior query to locate commands other than said displayed commands without switching between command and query modes of speech detection.

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10.   The method of claim 9 wherein said step of modifying said prior speech query replaces said prior query with a new speech query.

11.   A computer program having program code included on a computer readable medium for speech command input recognition in an interactive computer controlled display system comprising:

    means for predetermining a plurality of speech commands each associated with a corresponding plurality of system actions,

    means for concurrently detecting said predetermined speech commands and non-predetermined speech queries for locating commands,

    means responsive to a detected predetermined speech command for carrying out the system action corresponding to the command, and

    means responsive to a detected non-predetermined speech query for attempting to locate predetermined commands applicable to said query.

12.   The computer program of claim 11 further including means for displaying said detected speech query.

13.   The computer program of claim 12 further including means for displaying located commands applicable to said query.

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14.   The computer program of claim 13 further including means responsive to a detected speech query for modifying a displayed prior speech query whereby a user may speak a displayed located command to activate said means for carrying out a system action or speak a query to modify said prior query to locate commands other than said displayed commands without switching between command and query modes of speech detection.

15.   The computer program of claim 14 wherein said means for modifying said prior speech query replaces said prior query with a new speech query.

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